UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

December 6, 2006

James J. Sheppard, President and
Chief Executive Officer
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION FOR STP NUCLEAR OPERATING COMPANY REGARDING SOUTH TEXAS PROJECT UNIT 2 [TAC NO. MD3713, NOED NO. 06-4-001]

Dear Mr. Sheppard:

By letter dated December 4, 2006, South Texas Project Nuclear Operating Company (STPNOC) confirmed a December 3, 2006, verbal request that the NRC exercise discretion to not enforce compliance with the actions required in South Texas Project (STP), Unit 2, Technical Specification (TS) 3.5.2, "ECCS Subsystems - T_{avg} Greater Than or Equal to 350 deg F," Action a. and the actions required in TS 3.6.2.1, "Containment Spray System."

STPNOC requested that a Notice of Enforcement Discretion (NOED) be granted pursuant to the NRC's policy regarding exercise of discretion for an operating facility, set out in Section VII.C of the NRC's Enforcement Policy, and be effective for a period of 8 days, expiring on December 12, 2006. This letter documents our telephone conversation on December 3, 2006, at 3:38 p.m. (all times discussed in this letter refer to Central Standard Time), when we verbally granted your request for enforcement discretion. We understand that the condition causing the need for this NOED is currently being corrected and is expected to be addressed by December 12, 2006. The basis for our decision is provided in the following discussion.

Your letter documented information previously discussed with the NRC in a telephone conference which occurred at approximately 1 p.m. on December 3, 2006. The principal NRC staff members who participated in the telephone conference included: Dwight Chamberlain, Director, Division of Reactor Safety (DRS); Anton Vegel, Deputy Director, Division of Reactor Projects (DRP); Tim McGinty, Deputy Director, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation (NRR); Claude Johnson, Chief, Projects Branch A, DRP; David Terao, Chief, Plant Licensing Branch 4, NRR; John Dixon, Senior Resident Inspector, DRP; Mike Runyan, Senior Reactor Analyst, DRS; Quynh Nguyen, Project Manager, NRR; Jack Donohew, Project Manager, NRR; Mohan Thadani, Project Manager, NRR; See-Meng Wong, Reactor Analyst, NRR; and Jeffrey Mitman, Reactor Analyst, NRR.

Your staff requested enforcement discretion to preclude required entry into Mode 3 (Hot Standby) for Unit 2 by 7 a.m. on December 4, 2006. Specifically, on November 27, 2006, at 1 a.m., you entered the applicable TS 3.5.2 and TS 3.6.2.1 action statements due to planned maintenance on the Unit 2 "A" high head safety injection (HHSI) pump. The Train "A" low head

safety injection (LHSI) and containment spray (CS) pumps share a common suction header with the HHSI pump and, because this line was out of service to support HHSI pump maintenance, the LHSI and CS pumps were also rendered inoperable. During performance of maintenance on the HHSI pump, problems were encountered which challenged the restoration of the pump within the 7-day TS allowed outage time. On December 4, 2006, at 1 a.m., if the Unit 2, Train A, HHSI, LHSI, and CS systems had not been restored, actions were required to be taken to place Unit 2 in at least HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the following 6 hours. On December 3, your staff requested that the 7-day TS allowed outage time (AOT) be extended an additional 8 days to support corrective maintenance activities on the Unit 2 Train “A” HHSI pump without having to shut down Unit 2.

TS 3.5.2, "ECCS Subsystems - T_{avg} Greater Than or Equal to 350 deg F," requires in Modes 1 through 3 that three independent trains of the emergency core cooling system (ECCS) be operable. TS 3.6.2.1, "Containment Spray System," requires in Modes 1 through 4 that three independent trains of CS be operable.

Action a. of TS 3.5.2 states:

> "With less than the above subsystems OPERABLE, but with at least two High Head Safety Injection pumps in an OPERABLE status, two Low Head Safety Injection pumps and associated RHR heat exchangers in an OPERABLE status, and sufficient flow paths to accommodate these OPERABLE Safety Injection pumps and RHR heat exchangers,** restore the inoperable subsystem(s) to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours."
>
> (The associated **footnote states: “Verify required pumps, heat exchangers and flow paths OPERABLE every 48 hours.”)

Action of TS 3.6.2.1 states:

> "With one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours."

STPNOC informed the NRC staff that on November 27, 2006, at 1 a.m., the Unit 2 Train “A” ECCS was declared inoperable to perform planned maintenance activities. This planned activity to replace the mechanical seal and o-rings for the Train “A” HHSI pump started as scheduled on November 28, 2006. This same activity had been performed successfully for this type of pump at STP on four previous occasions and the work week maintenance schedule planned for Train “A” ECCS to be returned to operable status at 7 a.m. on November 30, 2006.

During the disassembly of the HHSI pump shaft coupling, problems were encountered due to reduced uncoupled vertical travel of the pump shaft and the oxidation binding of the half-coupling to the pump shaft. As a result, hydraulic tool force was needed to disassemble the coupling.

We understand that the mechanical seal package was subsequently re-installed and the pump casing was refilled with water to check freedom of rotation of the pump shaft and that unsuccessful attempts were made to check the pump rotating assembly freedom of rotation. STPNOC determined that the forces used to disassemble the coupling, combined with repeated vertical movement of the shaft during maintenance, most likely caused an internal obstruction which prevented the shaft from rotating. As a result, STPNOC decided on December 1, 2006, to replace the HHSI pump rotating element to restore the pump to operability. The rotating element replacement for this type of pump is a first-time evolution for STP. Your staff stated that parts are available to support this work and that the rotating element replacement and post-maintenance testing is expected to require at least an additional 6 days beyond the 7-day AOT stated in the applicable TS Limiting Condition for Operation Action requirements. An additional 8-day AOT extension was requested by your staff to allow for contingencies for this first-time evolution, without requiring a Unit 2 shutdown.

Based on the information provided in telephone conversations on December 3, 2006, and in your December 4, 2006, letter, the NRC has determined that Criterion B.2.1.1.a of NRC Inspection Manual Part 9900, “Technical Guidance, Operations - Notices of Enforcement Discretion,” were met. The NRC reviewed your written request for enforcement discretion dated December 4, 2006, and verified consistency between your oral and written requests. The NRC’s basis for this discretion considered: (1) the availability of the two redundant Unit 2 trains; (2) the availability of offsite and onsite electrical power; (3) the compensatory measures to reduce the probability of a plant transient while ensuring the availability of other safety-related equipment; and (4) the quantitative risk assessment of the condition which indicated that the risk associated with increasing the allowed outage time an additional 8 days did not cause the risk to exceed the level determined acceptable during normal work controls and, therefore, there is no net increase in radiological risk to the public.

The STPNOC final calculated risk analysis indicated that the incremental conditional core damage probability (ICCDP) for the proposed 8-day extension is 4.4E-07, and the incremental conditional large early release probability (ICLERP) for the proposed 8-day extension is 7.57E-11, in which both values are less than the guidance thresholds in Inspection Manual Part 9900 Technical Guidance. To further mitigate the risk impact, as mentioned in (3) above, STPNOC committed to implement a series of compensatory actions for the duration of the enforcement discretion period. Some of the compensatory actions that STPNOC committed to implement included: (1) the confirmation of operability of the Unit 2 Train “B” and “C” HHSI systems by performance of the quarterly pump run surveillances prior to entry into the Enforcement Discretion period; (2) no planned maintenance will be performed on the Unit 2 Train “B” or “C” engineered safety features trains; (3) the switchyard will be locked, and STPNOC will ensure no maintenance activities are performed in the switchyard that could directly cause a loss-of-offsite-power event, unless required to ensure the continued reliability and availability of the offsite power sources; (4) no planned maintenance will be performed on any of the standby diesel generators, the auxiliary feedwater system, or steam generator

power-operated relief valves; (5) actions will be taken to ensure availability of one fire water storage tank and two diesel fire pumps, and periodic walkdowns will be conducted in the Train "B" cable spreading room to ensure no hot work is being performed; (6) Unit 2 on-shift operations crews will evaluate compensatory actions and will establish any additional actions as deemed necessary to effectively manage risk during the enforcement discretion period. As listed in Attachment 2 to your December 4, 2006, letter, STPNOC has implemented, or is implementing, the compensatory actions summarized above, as well as other actions, to minimize plant risk during the enforcement discretion period. The NRC staff determined that, although the STPNOC risk analysis indicated that the ICCDP and ICLERP would increase slightly as a result of the enforcement discretion, the compensatory measures committed to by the licensee (but not credited in the risk assessment) would substantially reduce or eliminate this risk increase. As an example, measures to eliminate work in the switchyard and hot work activities throughout the plant would result in a mitigation of baseline loss of offsite power and fire initiating event frequencies. Additionally, briefings for Operations shift crews on the emergency operating procedures assuming one train of safety injection and CS is unavailable are expected to lower the assumed human error probabilities associated with the baseline risk. The NRC staff determined that, based on qualitative judgement, the compensatory measures were sufficient to result in no net increase in risk. We understand that STP will continue to evaluate and monitor the risk significance associated with extending the AOT for the affected Train "A" ECCSs.

On the basis of the NRC staff's evaluation of your request, we have concluded that granting of this NOED is consistent with the Enforcement Policy and staff guidance and has no adverse impact on public health and safety. Therefore, as we communicated to your staff at 3:38 p.m. on December 3, 2006, it is our intention to exercise discretion to not enforce compliance with TS 3.5.2, Action a., and actions required in TS 3.6.2.1 for South Texas Project Unit 2 for the period from December 4, 2006, to 1 a.m. December 12, 2006.

In addition, as discussed on December 3, 2006, and as documented in your letter, the NRC staff agrees with STPNOC's determination that a follow-up TS amendment request was not needed. The staff finds that a TS amendment (either a temporary or permanent amendment) needed for circumstances similar to those addressed by the NOED is not necessary because such changes will be covered under the Risk Management Technical Specifications Initiative 4b currently under review by the NRC staff for South Texas Project.

My staff will be closely monitoring the work on the HHSI pump this week. As you committed in Attachment 2 of your December 4, 2006, letter, any changes that affect the basis for approval of the enforcement discretion request or any changes to plant configuration that affect the calculated risk basis will be communicated to the NRC resident inspectors.

As stated in the Enforcement Policy, action may be taken, to the extent that violations were involved, for the root cause that led to the noncompliance for which this NOED was necessary.

Sincerely,

/RA/

Bruce S. Mallett
Regional Administrator

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